KVARTA

DVB STREAMER KVARTA
USER'S MANUAL

Contents

1. INTRODUCTION 3
1.1. About KVARTA 3
1.2. About DVB 3
2. DVB STREAMER Kvarta 3
2.1. INCLUDED ACCESSORIES 3
2.2. GENERAL SPECIFICATIONS OF THE DVB STREAMER 4
3. Getting connected 5
3.1. Connecting to the embedded web site 5
3.2. Front panel 5
3.3. Back panel 5
4. CONFIGURATION AND OPERATION 6
4.1. RF Configuration 6
4.2. Streaming configuration 7
4.3. RF Measurements 8
4.4. Stream log 9
4.5. Advanced Configuration 10
4.5.1. SNMP configuration 10
4.5.2. Programs configuration 10
4.5.3. RTSP configuration 11
4.5.4. Remuxer Configuration 12
4.5.5. VLAN 12
5. GLOSSARY 13
APPENDIX A - DVB STREAMER ASCII COMMAND SET 14
A.1. DEFAULT VALUES 14
A.2. Configuration and special files on the device 14
a. config.ini – Keeps all configuration information (windows configuration file) 14
b. programs.txt – Keeps programs on the device (comma separated file) 14
c. help.txt – ASCII commands description file 14
d. ***.mib – SNMP MIB file 14
A.3. ASCII COMMANDS 14

** Depends on the model*

1. INTRODUCTION

1.1. About KVARTA

For more than 10 years, Kvarta has been developing products for Broadcasters and CATV providers. Our devices are used by major radio and television broadcasters and regulatory agencies.

Broadcasting is our passion. We know what you want and we have designed many devices, which are perfectly adapted to your needs. These include RDS encoders, FM Radio monitors and CATV systems. KVARTA has a reputation for excellence and innovation among its clients and partners.

Our CATV, DVB Monitoring devices and RDS/RBDS encoders are growing in popularity due to their reliability, quality and functionality at exceptional prices. All of our products have been designed for professional broadcast use and are fully meet the standards. Our devices incorporate embedded web site and SNMP communication.

1.2. About DVB

Digital Video Broadcasting (DVB) is a suite of internationally accepted open standards for digital television. DVB standards are maintained by the DVB Project, an international industry consortium with more than 270 members, and they are published by a Joint Technical Committee (JTC) of European Telecommunications Standards Institute (ETSI), European Committee for Electrotechnical Standardization (CENELEC) and European Broadcasting Union (EBU).

2. DVB STREAMER Kvarta

2.1.INCLUDED ACCESSORIES

In your package, you should receive:

- Your DVB STREAMER
- Quick start notice
- AC main power cord
- Straight ethernet cable

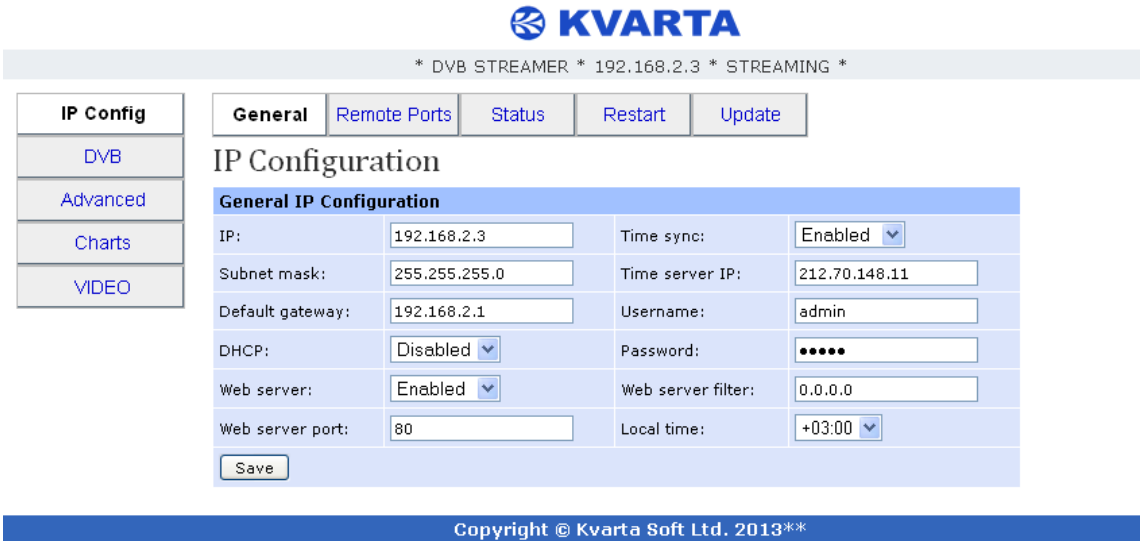
2.2.GENERAL SPECIFICATIONS OF THE DVB STREAMER

Communication ports	
Ethernet	100baseT – Web Server and UDP/TCP (SNMP/ASCII)
Frequency range and Modulation	
Frequency Range	46 MHz - 1004 MHz; 950 MHz- 2150 MHz (depending on the model)
Digital TV	DVB-T, DVB-H, DVB-C, DVB-S, DVB-S2 (depending on the model)
Demodulator (depending on the model)	
DVB-T	ETSI EN 300 744
DVB-H	ETSI EN 300 744 Annex F
DVB-C	ETSI EN 300 429 and ITU J.83 Annex A/C
DVB-S	EN 300 421
DVB-S2	ETSI EN 302 307
Measurements	
Standard	ETSI TR 101 290 V1.2.1
Level	30dBuV - 100dBuV (±2dBuV)
BER	1E-1~ 1E-7
MPEG Decoding	
Tables	PAT,PMT,SDT,CAT,TDT,TOT
Power Supply	
Supply voltage	12V/1A
Voltage tolerance	+/- 10%
Mechanical aspects	
Height	34 mm
Width	145 mm
Depth	210 mm
Net weight	0,7 kg
Info	
Updates	Available
Front panel LEDs	Power supply, LAN, Lock,Stream

3. Getting connected

3.1. Connecting to the embedded web site

1. Connect the Ethernet cable between the RJ45 and the network..
2. Open a Web browser (Mozilla ,Internet Explorer, …) and enter the encoder's IP address (Default: **192.168.2.3)** you just set in the previous step. Log in with the default username and password (admin/admin). The home page of the embedded web site is displayed:



NOTE: *Your computer should have IP address which is in the same network.*

3.2.Front panel

POWER – Indicates that power supply is available.
LAN – Indicates LAN connection ON/OFF.
LOCK – Demodulator lock indicator
STREAM - Indicates streaming of MPEG TS data
IN A – RF input A
IN B – RF input B

3.3. Back panel

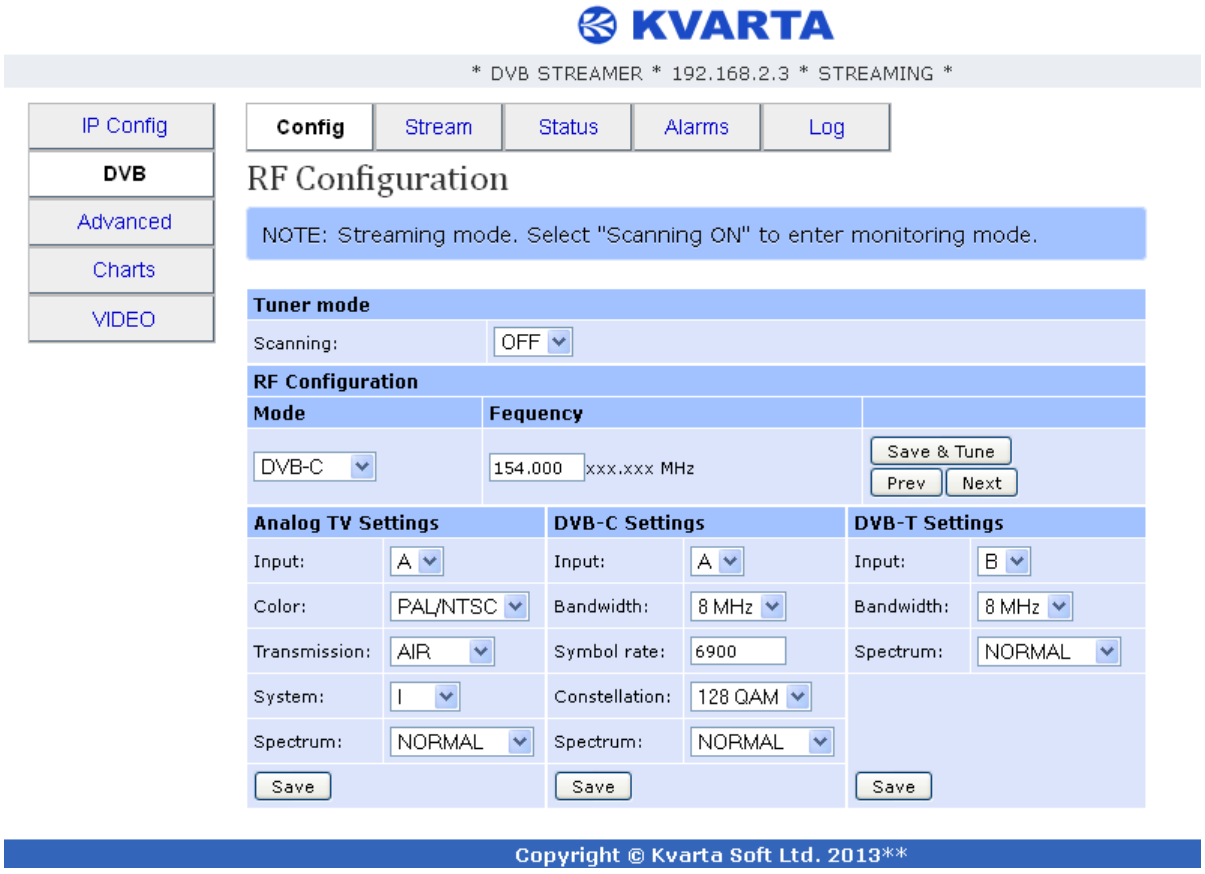
Micro SD – 2GB containing configuration
LAN – Ethernet connection
12V – Adapter input

4. CONFIGURATION AND OPERATION

4.1. RF Configuration

- Open the embedded web page and click **DVB -> Config**
- Scan mode should be off as it is in the picture below
- Select the modulation type Analog/DVB-C/DVB-T [1]
- Type the center frequency of the monitored carrier
- Click Save & Tune

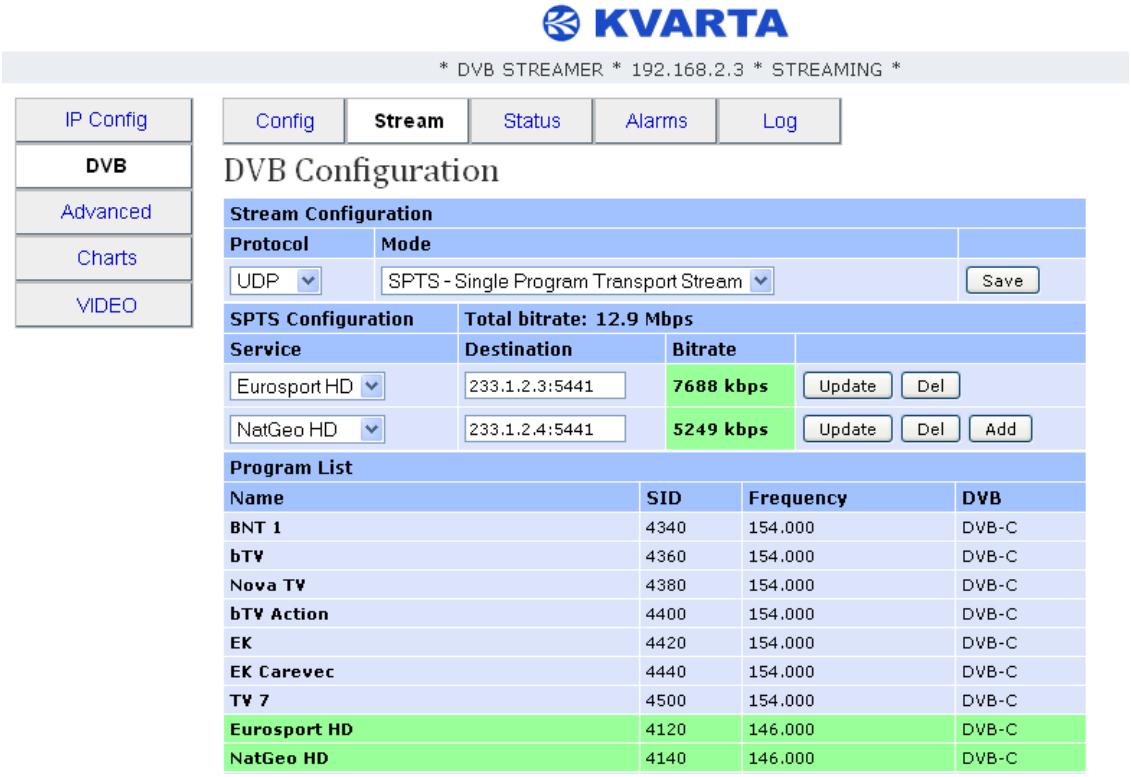
- Connect the RF Antenna or CATV source to IN A or IN B
- Select the appropriate Input (A or B) used for the type of modulation Analog/DVB-C/DVB-T
- Configure other relative settings like Bandwidth, Symbol Rate, Constellation and Spectrum.
- Click the Save button below the settings to store the configuration



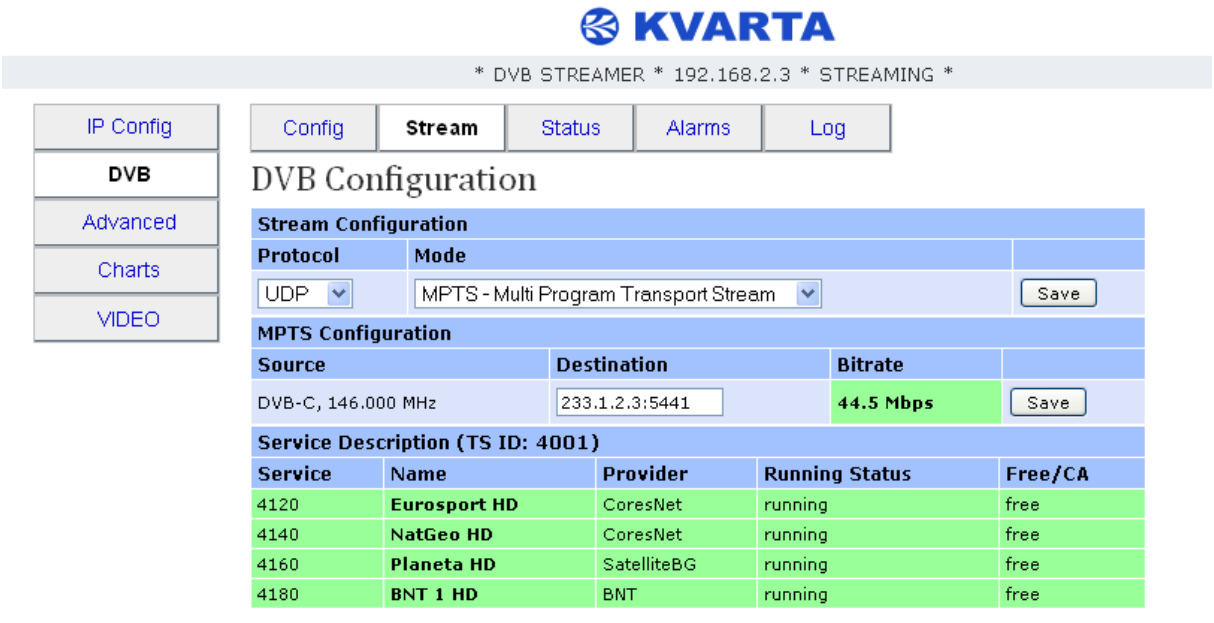
[1] Depends on the DVB Streamer model

4.2. Streaming configuration

- Open the embedded web page and click **DVB -> Stream**
- Select the protocol **UDP/RTP/RTSP/OFF**
- Select the type of MPEG TS : **MPTS** - Multi Program Transport Stream, **SPTS** – Single Program Transport Stream
- For SPTS select up to 5 services on the same frequency to be streamed



- For MPTS just select the destination address for the IP stream

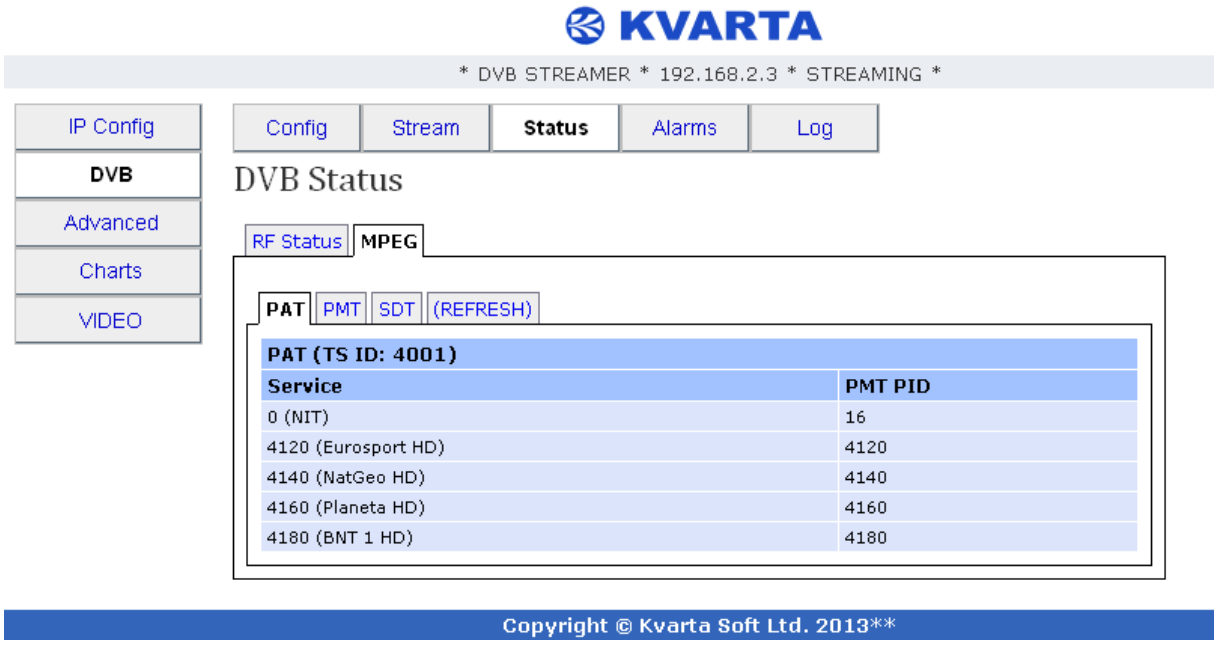


Copyright © Kvarta Soft Ltd. 2013**

4.3. RF Measurements

- Checking the status and measured values
- Click **DVB -> Status -> RF Status**
- This web page constantly displays the measured RF parameters – Demodulator lock, FEC Lock, Level and BER and other measurements depending on the modulation type.

- Click the **DVB-> Status -> MPEG**
- This page displays various MPEG tables PAT , PMT, SDT, TDT, CAT, TOT (Click F5 to reload tables)



4.4. Stream log

- Click **DVB-Monitor -> Log -> Stream log**
- Displays log with 20 of the latest stream changes.

4.5. Advanced Configuration

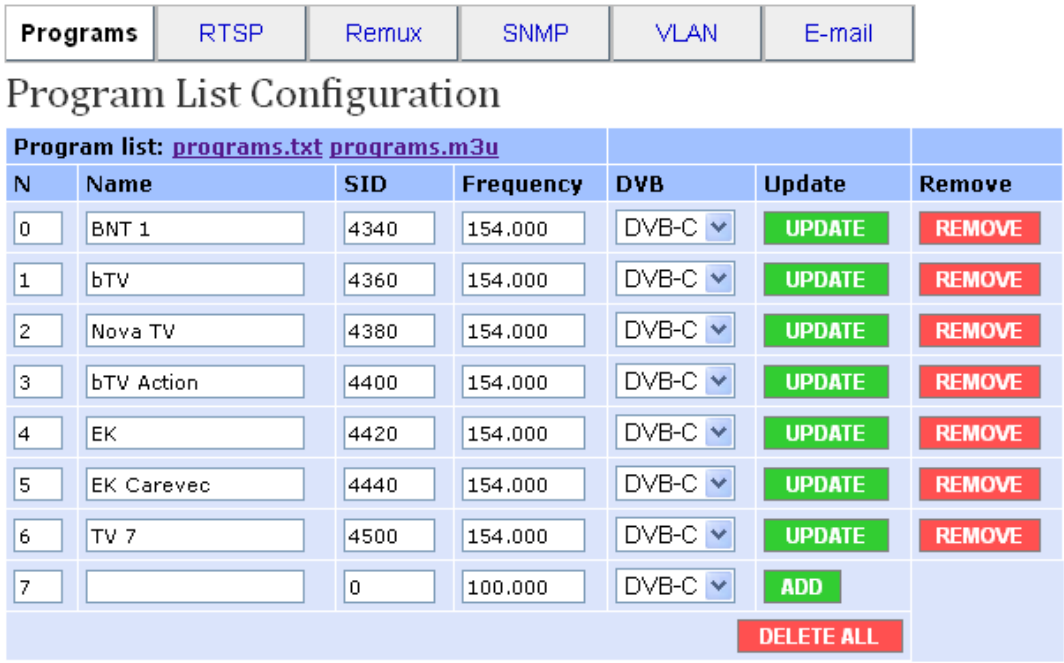
4.5.1. SNMP configuration

NOTE: Please, contact us for more support at support@kvarta.net

SNMP Configuration	
SNMP:	Enabled
Read only community:	000000000000
Read write community:	private
Traps server IP:	0.0.0.0
Traps port:	162
Traps community:	public
Save	

4.5.2. Programs configuration

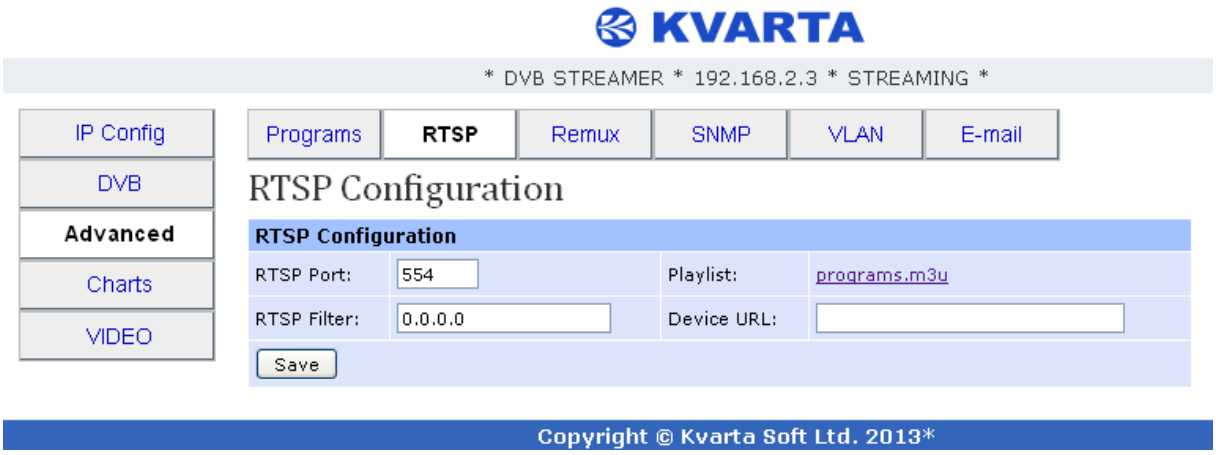
- Click **Installation -> Programs** to configure programs.
- programs.m3u can be loaded in VLC for video monitoring
- You can add/edit/delete all parameters for the services found in the multiplex.



4.5.3. RTSP configuration

- Click **Advanced -> RTSP** to enter real time streaming protocol specific configuration
- The device URL can be used if the device is behind router
- programs.m3u can be loaded in VLC for video monitoring

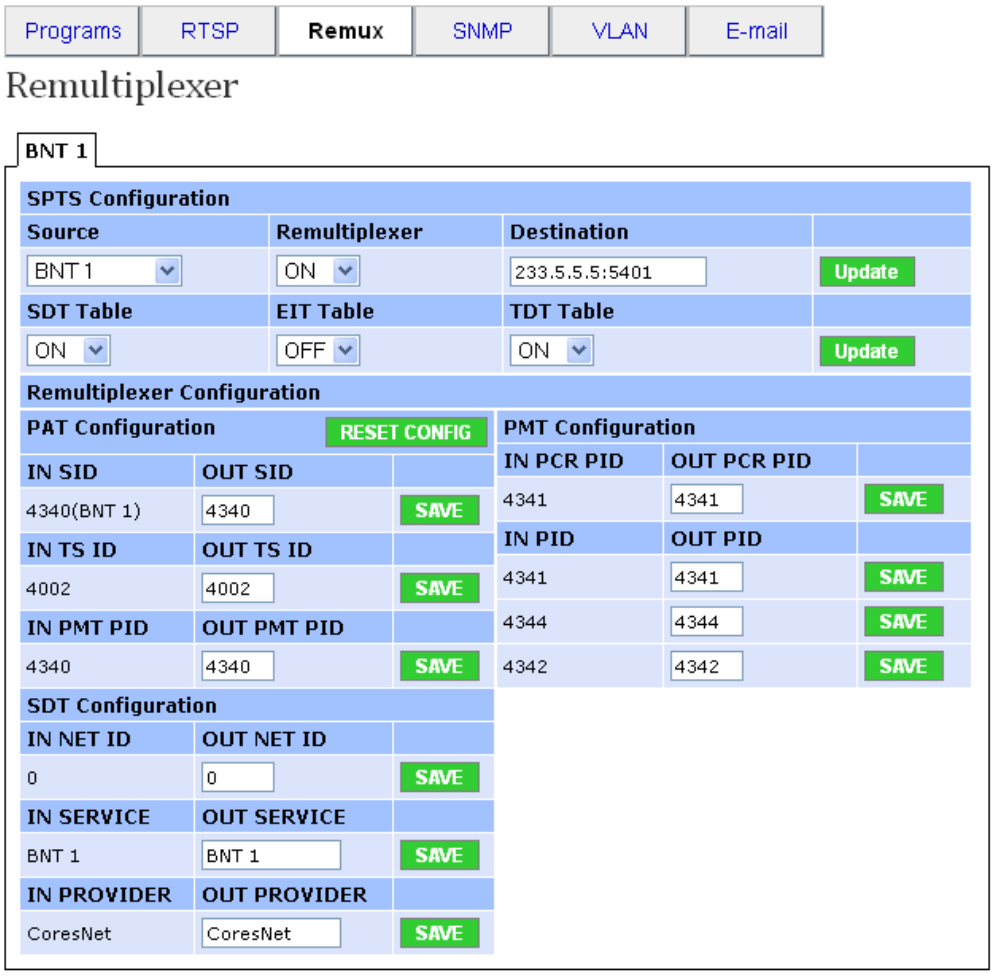
NOTE: You should be in Streaming mode and RTSP should be the protocol. Only one RTSP client is supported.



4.5.4. Remuxer Configuration

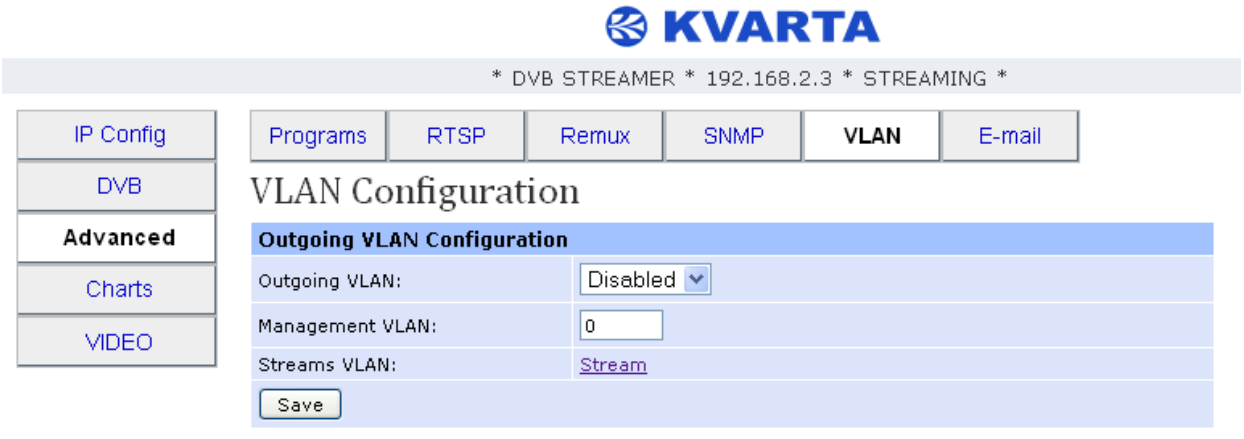
- Click **Advanced -> Remux** to enter SPTS remultiplexer specific configuration
- You can reconfigure the output SID, PIDs, Service Name, Provider Name, etc.

NOTE: It is only working in Streaming mode and SPTS streams.



4.5.5. VLAN

- Click **Advanced -> VLAN** to configure VLAN settings for the output streams or the management



Copyright © Kvarta Soft Ltd. 2013*

5. GLOSSARY

DVB – Digital Video Broadcasting

DVB-C – Digital Video Broadcasting - Cable

DVB-T – Digital Video Broadcasting – Terrestrial

SNMP – Simple Network Management Protocol

SMTP – Simple Mail Transfer Protocol

PID – Packet Identification

PAT – Program Allocation Table

PMT – Program Map Table

NIT – Network Identification Table

TDT – Time and Date Table

TOT – Time Offset Table

SDT – Service Description Table

CAT – Conditional Access Table

APPENDIX A -
DVB STREAMER ASCII COMMAND SET

A.1. DEFAULT VALUES

Parameter	Default Value
IP	192.168.2.3
Mask	255.255.255.0
Gateway	192.168.2.1
DHCP	Disabled
Web Server	Enabled
Web Server : <username>,<password>	admin,admin
CT synchronization:	Enabled
Time server IP :	129.6.15.28

A.2. Configuration and special files on the device

a. **config.ini – Keeps all configuration information (windows configuration file)**

b. **programs.txt – Keeps programs on the device (comma separated file)**

c. **help.txt – ASCII commands description file**

d. *****.mib – SNMP MIB file**

A.3. ASCII COMMANDS

```
-- ***********************************************
-- Device Model: DVB STREAMER 0.06A (28/05/2013)
-- Auto-generated file!
-- Definitions apply to DVB STREAMER
-- Supported ASCII COMMANDS
-- for more information support@kvarta.net
-- Kvarta Soft Ltd (www.kvarta.net)
-- ***********************************************

--
-- The 'GENERAL' group;
--

IP                              read-write      IP Address
MASK                            read-write      Sub. network mask
GATEWAY                         read-write      Gateway IP Address
DHCP                            read-write      DHCP Enable/Disable
DNS                             read-write      DNS Server IP
DNS_BY_DHCP                     read-write      DNS Server by DHCP
```

```
CT_SERVER_ON                    read-write      Clock time server used
CT_SERVER_IP                    read-write      Clock time server(RFC-868)
CT_OFFSET                       read-write      Clock time offset
LOG                             read-write      Logs All Ip connections
USERNAME                        read-write      Set/Display username
PASSWORD                        read-write      Set/Display password
TCP_TIMEOUT                     read-write      Timeout in seconds if no
communication,close socket
VLAN_ON                         read-write      Outgoing VLAN On/Off
TCP_VLAN                        read-write      Management VLAN
MODEL                           read-only       Device model
VERSION                         read-only       Firmware version
DEVICE_NAME                     read-write      Name of the device(Location)
WEB_SNMP_SERVER                 read-only       SNMP Server On/Off
MAC                             read-only       Reads the MAC address
CURRENT_IP                      read-only       Reads the current IP address
CURRENT_MASK                    read-only       Reads the current sub. network
mask
CURRENT_GATEWAY                 read-only       Reads the current gateway IP
address
DHCP_STATUS                     read-only       Reads DHCP status
UPDATE_AVAILABLE                read-only       Reads if there is update
available
UPDATE_START                    write-only      Starts un update

--
-- The 'WEB' group;
--

WEB.SERVER                      read-write      Embedded Web Server On/Off
WEB.PORT                        read-write      TCP port of the web
server(Default:80)
WEB.FILTER                      read-write      Allowed HOST IP to connect to
the web server
WEB.VLAN                        read-write      VLAN of the web server

--
-- The 'TCP' table;
--

TCP(???).TYPE                   read-write      Remote port TCP/UDP/OFF
TCP(???).PORT                   read-write      Remote port TCP/UDP port
number
TCP(???).FILTER                 read-write      Remote port input IP filter
TCP(???).PROTOCOL               read-write      Remote port protocol
ASCII/SNMP
TCP(???).VLAN                   read-write      Remote port VLAN

--
-- The 'SNMP' group;
--

SNMP.SERVER                     read-write      SNMP Server On/Off
SNMP.RO_PASSWORD                read-write      SNMP read only community
string
SNMP.RW_PASSWORD                read-write      SNMP read write community
string
SNMP.TRAP_PORT                  read-write      SNMP Traps destinatio port
SNMP.TRAP_PASSWORD              read-write      SNMP trap password
SNMP.TRAP_SERVER1               read-write      SNMP trap server(1) IP
SNMP.TRAP_SERVER2               read-write      SNMP trap server(2) IP
SNMP.TRAP_SERVER3               read-write      SNMP trap server(3) IP
SNMP.TRAP_SERVER4               read-write      SNMP trap server(4) IP
```

```
--
-- The 'TUNER' group;
--

TUNER_MODE                      read-write      Tuner mode Analog/DVB-C/DVB-T
FREQUENCY                       read-write      Tune frequency
ATV_INPUT                       read-write      Input 0=A or 1-B
ATV_COLOR                       read-write      0-PAL_NTSC or 1-SECAM
ATV_SPECTRUM                    read-write      0-Normal; 1-Invert
ATV_TRANS                       read-write      0-Terrestrial; 1-Cable
ATV_SYS                         read-write      0-B;1-GH;2-M;3-N;4-I;5-DK;6-
L;7-LP;
DVBT_INPUT                      read-write      Input 0-A or 1-B
DVBT_BW                         read-write      Default bandwidth
6/7/8(default)
DVBT_SPECTRUM                   read-write      0-Normal, 1-Inverted
DVBC_INPUT                      read-write      Input 0-A or 1-B
DVBC_BW                         read-write      Default bandwidth
6/7/8(default)
DVBC_QAM                        read-write      Default constellation
16/32/64/128/256
DVBC_SYMBOLS                    read-write      Default symbol rate 1000 -
7000
DVBC_SPECTRUM                   read-write      0-Normal, 1-Inverted
TUNE_SAVE                       COMMAND         Save tuner configuration
TUNE_NEXT                       COMMAND         Go to next carrier
TUNE_PREV                       COMMAND         Go to previous carrier
CARRIER_STATUS                  read-only       Single frequency mode tuner
status.

--
-- The 'RTSP' group;
--

RTSP.PORT                       read-write      RTSP port configuration
(Default:554)
RTSP.FILTER                     read-write      RTSP input IP filter
RTSP.ADDRESS                    read-write      RTSP address if device behind
router(Default:empty string) uses current IP
RTSP.PROG                       write-only      Select RTSP program to stream

--
-- The 'STREAMING' group;
--

STREAM_PROTOCOL                 read-write      Select streaming protocol
OFF/UDP/RTP/RTSP
STREAM_TYPE                     read-write      Select MPEG TS stream type
MPTS/SPTS
STREAM_COUNT                    read-write      Select stream count for SPTS
only
STREAM_VLAN                     read-write      Select default streaming VLAN

--
-- The 'PROGRAMS' group;                        Programs commands
--

PROGRAMS.REMOVE                 COMMAND         Command to delete all programs
from the list
PROGRAMS.DELETE                 COMMAND         Command to delete all programs
from the list
```

```
PROGRAMS.SAVE                   COMMAND         Command to save programs to
programs.txt file
PROGRAMS.LOAD                   COMMAND         Command to load programs from
programs.txt file
PROGRAMS.GET_NEW                COMMAND         Command that automatically
checks for new channels on carrier and adds them to the list

--
-- The 'P' table;                               Programs configuration
--

P(???).INDEX                    read-write      Program index in the list
P(???).SID                      read-write      Program SID number
P(???).FREQ                     read-write      Program frequency
P(???).NAME                     read-write      Program service name
P(???).DVB_MODE                 read-write      Program DVB mode DVB-C/DVB-T
P(???).SAVE_ALL                 COMMAND         Command to save programs to
programs.txt file
P(???).REMOVE                   COMMAND         Command to remove the program
from the list
P(???).DELETE                   COMMAND         Command to remove the program

--
-- The 'S' table;                               Stream configuration
--

S(???).RESET                    COMMAND         Reset remuxer settings
S(???).ADDRESS                  read-write      Stream destination IP address
and port
S(???).SID                      read-write      Streaming sid number
S(???).VLAN                     read-write      Streaming VLAN
S(???).BITRATE                  read-only       Bitrate
S(???).REMUX                    read-write      Streaming remuxer On/Off
S(???).SDT_EN                   read-write      Stream SDT table On/Off
S(???).EIT_EN                   read-write      Stream EIT table On/Off
S(???).TDT_EN                   read-write      Stream TDT table On/Off
S(???).OUT_SID                  read-write      Stream REMUX output SID
S(???).OUT_TS                   read-write      Stream REMUX output TS
S(???).OUT_PMT_PID              read-write      Stream REMUX output PMT PID
S(???).OUT_NET_ID               read-write      Stream REMUX output NET ID
S(???).OUT_PCR_PID              read-write      Stream REMUX output PCR PID
S(???).OUT_SNAME                read-write      Stream REMUX output service
name
S(???).OUT_PNAME                read-write      Stream REMUX output provider
name
S(???).ES_COUNT                 read-write      Stream REMUX elementary
streams count
S(???).IN_PID(???)              read-write      Stream REMUX input elementary
stream PID
S(???).OUT_PID(???)             read-write      Stream REMUX output elementary
stream PID
S(???).DELETE                   COMMAND         Command to delete the SPTS
stream
S(???).ADD                      COMMAND         Command to add new SPTS stream

--
-- The 'STREAM_LOG' table;                      Log of stream changes
--

STREAM_LOG(???).TIME            read-only       Log item time
STREAM_LOG(???).MESSAGE         read-only       Log item description

--
```

```
-- The 'COMMANDS' group;
--

RESET                          COMMAND        Software reset (except IP) and
reboot of the device
RESTART                        COMMAND        Software reboot of the device
```